International Journal of Body, Mind and Culture

Investigating and Designing an Online Psychosocial Support Platform for Caregivers

Farzad Goli¹, Niloofar Ghorbani-Zavareh², Mostafa Saved-Mirramezan³, Hamid Afshar-Zanjani⁴, Alexander Wunsch⁵, Mohammadreza Sharbafchizadeh⁶, Anne-Marie Muller⁷, Masoud Bahrami⁸, Mousa Alavi⁹, Sara Ahangar-Ahmadi¹⁰, Carl Eduard Scheidt¹¹

¹ Professor, Faculty Instructor, Energy Medicine University, California, USA AND Danesh-e-Tandorosti Institute, Isfahan, Iran

² MSc, Researcher, Danesh-e-Tandorosti Institute, Isfahan, Iran

³ Resident of Psychiatry, Department of Psychiatry, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

⁴ Professor, Department of Psychiatry, School of Medicine AND Psychosomatic Research Center, Khorshid Hospital, Isfahan University of Medical Sciences, Isfahan, Iran

⁵ Assistant Professor, Department of Psychosomatic, Albert Ludwigs University, Freiburg, Germany

⁶ Assistant Professor, Department of Psychiatry, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

⁷ PhD, Department of Psychosomatic, Albert Ludwigs University, Freiburg, Germany

⁸ Professor, Cancer Prevention Research Center, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran

⁹ PhD, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran

¹⁰ PhD, Department of Teaching and Learning, University of Texas Rio Grande Valley, Texas, United States

¹¹ Professor, Department of Psychosomatic, Albert Ludwigs University, Freiburg, Germany

Corresponding Author: Carl Eduard Scheidt; Professor, Department of Psychosomatic, Albert Ludwigs University, Freiburg, Germany

Email: carl.eduard.scheidt@uniklinik-freiburg.de

Qualitative Study

Abstract

Background: Healthcare professionals are prone to many psychosocial issues including job burnout, depression, and anxiety, which can affect the healthcare systems and societies. This has been intensified by the outbreak of the Covid-19 pandemic. Many of the caregivers' problems are due to insufficient psychosocial competence and lack of suitable training for basic skills such as self-awareness, rapport, empathy, compassion, reasoning, decision-making, etc. The main purpose of this study was to design a psychosocial service package for caregivers to help them throughout their lives.

Methods: Data gathering was performed by conducting 2 focus groups, searching for studies to identify urgent and important healthcare needs, and finding the best way to address their necessities through a proactive and sustainable method.

Results: The online "healers' healing" platform is designed with 3 general objectives. The first objective was to present practical and effective materials to support caregivers in order to improve their psychosocial competence. The second objective was to monitor

the member's progress and measure the effectiveness of the program. Moreover, to make the members more active in training and their own health promotion, this platform leads and supports self-help groups for caregivers as the third purpose of this project. Furthermore, healers can be active in content development and community education in order to experience a more productive interaction within the communities of caregivers. **Keywords:** Caregivers; Burnout; Compassion Fatigue; Empathy; Psychosocial Support System; Online Learning

Citation: Goli F, Ghorbani-Zavareh N, Sayed-Mirramezan M, Afshar-Zanjani H, Wunsch A, Sharbafchizadeh M, et al. **Investigating and Designing an Online Psychosocial Support Platform for Caregivers.** Int J Body Mind Culture 2021; 8(2): 101-14.

Received: 19 Mar. 2021 Accepted: 05 Apr. 2021

Introduction

Since the beginning of the Covid-19 pandemic, all human beings have had new experiences that have caused many fears and disappointments and affected their lives in all aspects. Therapists and health care providers have shouldered so many mental and physical burdens as they were supposed to serve the patients, and there was no effort from the national health services to support them, especially in developing countries.

Many meta-analyses show that health care providers may face psychosocial difficulties such as anxiety, distress, fear, burnout, and compassion fatigue (Busch, Moretti, Purgato, Barbui, Wu, & Rimondini, 2020; Cavanagh et al., 2020; Zhang, Zhang, Han, Li, & Wang, 2018) Another meta-analysis examined and validated previous data during the Covid-19 pandemic period (Busch, Moretti, Mazzi, Wu, & Rimondini, 2021).

Health professionals are highly vulnerable to burnout syndrome, namely emotional exhaustion, alienation, and low job performance/satisfaction, in hospital work (Zanatta & de Lucca, 2015). Maslach, et al (1996) described burnout as a psychological syndrome that includes physical depletion, feelings of helplessness, negative self-concept, and negative attitudes towards work, life, etc.; it is an internal reaction to external stressors, combining emotional exhaustion, depersonalization, and a sense of reduced personal accomplishment.

Cospormac (2020) showed that burnout is a behavioral and occupational syndrome that affects healthcare professionals and medical students. The widespread manifestation of burnout is a significant risk for the medical system, and affects the efficiency and quality of medical services (Cospormac, 2020).

In the study by Gazelle, Liebschutz, and Riess (2015), physicians were twice as likely to suffer from burnout and work–life dissatisfaction. Numerous studies have shown that 25%–60% of physicians have reported burnout (Brecka, Vnukova, Raboch, & Ptacek, 2018; Brindley, Olusanya, Wong, Crowe, & Hawryluck, 2019; Gazelle et al., 2015; Shanafelt, 2009; Shanafelt et al., 2014).

The risk factors of burnout can be divided into the 2 categories of work setting factors and individual factors (Shanafelt et al., 2016; Shanafelt et al., 2015; West, Dyrbye, & Shanafelt, 2018).

Some studies show that organizations that allow physicians to control workplace issues and are "physician-friendly" and "family-friendly" are able to employ physicians with lower reported stress and higher career satisfaction (Williams et al., 2002).

We recognize burnout as a late-career phenomenon, while recent studies suggest that younger physicians are nearly twice as likely to experience stress and that the onset may be as early as residency training (Shanafelt, Sloan, & Habermann, 2003).

Gender is not a predictor of burnout, but after adjusting for age and other factors, some studies have realized female physicians to have 20%–60% increased odds of fatigue (Dyrbye et al., 2017; Shanafelt et al., 2016; West et al., 2018). Women experience more burnout because of the intense influence of emotional exhaustion. There is higher exhaustion levels among women due to work-home conflicts (Houkes, Winants, Twellaar, & Verdonk, 2011; Langballe, Innstrand, Aasland, & Falkum, 2011).

Neurotic personality types are more prone to burnout, while conscientious, extroverted, and agreeable individuals are less likely to present symptoms of burnout (Moss, Good, Gozal, Kleinpell, & Sessler, 2016; Naidoo, Tomita, & Paruk, 2020).

Empathy and burnout are related yet distinct. There is evidence of a negative association between burnout and empathy (Wilkinson, Whittington, Perry, & Eames, 2017). Enhancing healthcare professionals' ability for empathy through systematic

training programs may have significant effects on burnout syndrome. Studies suggest that the relationship between empathy and burnout is complex, and a capability to self-regulate emotions during empathic engagement may diminish the risk of burnout (Petros Galanis, 2019)

In a meta-analysis, a significant negative relationship was reported between burnout in caregivers and quality and safety of care (Salyers et al., 2017).

A reduction burnout program suggests that caregivers' skills like coping strategies, mindfulness-based stress reduction, self-compassion, and fostering compassion are effective in reducing caregivers' burnout (Adinda & Bintari, 2020; Gerber & Anaki, 2020; Hofmeyer, Taylor, & Kennedy, 2020; Shin & Song, 2019).

Decision fatigue is another characteristic affecting health providers' ability (Carminati, 2020). Some studies have shown that decision fatigue in caregivers affects their decision-making ability, and since it has been increased during the present pandemic, healthcare providers require education on ethical dilemmas (Masiero, Mazzocco, Harnois, Cropley, & Pravettoni, 2020; Persson, Barrafrem, Meunier, & Tingh, 2019). Hu et al. (2020) suggested that increasing shared decision-making can help decrease job burnout during the pandemic.

Decision-making that includes true telling can cause an ethical dilemma (Zhang & Min, 2020). Healthcare professionals face many ethical dilemmas in their workplace (Monrouxe & Rees, 2017). Ethical dilemmas faced by caregivers are growing during the Covid-19 pandemic (Menon & Padhy, 2020) and can affect their mental health. Some abilities like critical thinking can help caregivers' through such dilemmas (Zhang & Min, 2020). Skills like coping with emotions, critical thinking, empathy, and self-awareness define psychosocial competency, which plays a vital role in caregivers' self-efficiency (Singh, Singh, & Poonam, 2016).

The importance of identifying risk groups among nurses employed in psychiatric institutions in order to preserve and improve mental health, as well as improving the quality of the provided health services has been reported (Miloševic, Dimoski, Miljanovic, Stojanovic, Terzic-Markovic, & Jovanovic, 2020). Physician fatigue has destructive impacts on patient care, well-being, and the health care system. This may be the cause of decreased work productivity, low job satisfaction, poor quality of patient care, medical errors, healthcare system failure, early retirement, depression, fatigue, and increased level of stress (Moss et al., 2016; West et al., 2018).

A systematic review and meta-analysis on general practitioners worldwide showed that approximately half of them had the intention to leave their current position (Shen et al., 2020). Higher professional title, lower income level, lower job satisfaction, and lower morale were the factors related to turnover intention (Shen et al., 2020). Mahmoud, Elhosany, and Helal (2020) reported a significant correlation between psychological wellbeing and work motivation amongst nurses in governmental hospitals.

Caregivers may experience mental problems due to the Covid-19 pandemic. Mental health services ranked first among the most urgently needed measures (Fitzpatrick, Carson, & Weisz, 2020). Long-term caregivers experienced more psychosomatic symptoms than short-term caregivers, and both (long-term and short-term) reported mental disorders during the pandemic (Park, 2021). Individual mental health of caregivers may have unknown impacts on the child-parent relationship (Russell, Hutchison, Tambling, Tomkunas, & Horton, 2020). Negative emotions were dominant in frontline nurses at the beginning of the pandemic, but positive emotions appeared gradually through the development of self-coping styles and psychological growth (Sun et al., 2020). Accordingly, psychosomatic symptoms, mental disorders, occupational fatigue, and job burnout were prevalent within caregivers, especially with the occurrence and spreading of the Covid-19 pandemic. Thus, there is an urgent need to maintain caregivers' mental health, which can affect the health conditions of the community. The outbreak of the pandemic drew our attention to the essential needs of the health care community. These needs already existed and are part of the nature of health care. Lack of knowledge of and inattention to these needs have created problems for the health care community. Therefore, we decided to design and offer a psychosocial support system to meet the existing needs.

Methods

The present practical action research was conducted with the aim to help caregivers cope with the pandemic situation, a practical action research in which researchers and practitioners came together to identify potential problems, their underlying causes, and possible intervention projects.. This kind of action research is expected in the field of human service development (Burton, 2000; McKernan, 1996).

The first step in this action research was to gather information about the research problem. By searching the available literature on caregivers' mental needs and individual and occupational factors before and after the pandemic, we encountered many shortcomings regarding health care providers.

The second step was to hold focus groups. In this step, we organized expert panels to answer the following two questions in order to find a deeper understanding and identify the needs of health care providers:

1. What are the exact needs of healthcare providers?

2. How can we develop and implement a sustainable service package to address caregivers' needs?

Therefore, we performed 2 focus groups. The participants were selected using purposive sampling method and based on relevant job experiences related to the subject of the study.

The first one was held on the 27 October 2020 and the result was a list of healthcare providers' needs. The second focus group was conducted on 03 December 2020 with the subject of designing online service packages for psychosocial support for caregivers. In these 2 sessions, 11 experts participated (9 men and 2 women), including psychiatrists, psychologists, psychotherapists, general practitioners, nurses, and informatics specialists.

In order to analyze the content of the focus groups, all the interviews were first audiotaped, and then, transcribed. The questions were open-ended questions focused on general subject matters to prevent bias. The coding step was performed separately by 2 researchers, and it was reviewed and approved by a member of the focus group.

We used information obtained from the expert panels and research literature to design an online service package called "Healers' Healing".

Results

Healthcare providers' needs based on the first focus group (27 October 2020): Providers' needs based on the first focus group (27 October 2020) is shown in table 1.

Result of the second focus group (03 December 2020) with the subject of designing online service packages for psychosocial support for caregivers:

Result of the second focus group (03 December 2020) with the subject of designing online service packages for psychosocial support for caregivers is shown in table 2.

Therefore, in designing an appropriate response to address these growing needs in the medical staff, a proactive, evolutionary, and sustainable approach should be adopted.

http://ijbmc.org

| Problem Title | Problem Types |
|---|---|
| Workload | A sudden increase in workload due to the pandemic |
| | Increased incidence of disease in the treatment staff |
| | due to the pandemic |
| | Inadequate cooperation of governmental and non-governmental |
| | institutions in observing the protocols |
| | Lack of facilities and economic sanctions |
| | Insufficient incomes of therapists and lack of welfare facilities |
| | to reduce the burden of life |
| | Physical stress due to the use of COVID-19 safety equipment |
| | Mental and temporal pressure to learn and adapt to new tasks |
| Work uniformity (mainly after the pandemic) | Many patients with similar complaints |
| | Mechanical work processes |
| | Repetition of disabilities and uncertainties |
| The pressure of adapting to | The various therapeutic, educational, research, or managerial |
| he multiplicity of roles | roles that many nurses, physicians, and paramedics have |
| | The difference between the pace of work and the energy it |
| | takes to prepare for each role |
| | Incomplete work due to insufficient presence in each of the roles |
| | Feeling lower control over tasks |
| Sudden growth of | Communication inefficiency due to Internet technical problems |
| ligitalization (In recent | Confusion between personal and professional communication |
| ears, especially after | Work processes that lead to being a "Simple Clerk" and |
| he pandemic) | away from patients |
| | Training and lowering the quality of some work |
| | The pressure of learning new technologies |
| nability, ambiguity and | Doubts about the effectiveness of treatment protocols |
| incertainty in the | Ambiguity in the effectiveness of prevention methods |
| nanagement of the disease | Ambiguity in diagnostic protocols |
| Always, especially in the | Inability to fully immunize oneself against disease |
| post-Corona period) | Inability to fully immunize the family against disease |
| | Intra-organizational and inter-organizational inconsistencies |
| | Insufficient training in clinical reasoning |
| | Inadequate training in clinical decision-making |
| | The economic situation of the patient that causes some difficulties |
| | in decision-making |
| Emotional Dysregulation | Excessive contact with diseases and fear of infection |
| | Inability to maintain a certain distance from Covid-19 reveals a greater crisis |
| | Lack of empathy training and emotional regulation and resilience |
| | Lack of structured and regular psychosocial support programs |
| | for therapists |
| | Excessive exposure to difficult decisions and the resulting |
| | hesitation and feeling of guilt |
| | Dealing with multiple deaths (especially in the post-Corona era) |
| | and affecting from surprising from not having the opportunity for |
| | emotional cognitive processing |
| | Dealing with the death of colleagues (especially in the post-Corona era |
| | and fear of imminent death due to excessive exposure to corona virus |
| | Putting their family at risk because of their job and the resulting |
| | feeling of guilt (especially in the post-Corona period) |
| | Rejection by others and even loved ones because of the possibility of |
| | contamination and the resulting feeling of anger, rejection, and heartbreak |
| | Poor help-seeking behavior of therapists due to job considerations |
| | and stabilization in the role of the therapist |
| | Confusion between the two roles of hero and disease carrier |
| | Anger about patients considered as careless |
| | Feeling guilty about their anger with their patients |

Table 1. Results of the first focus group (27 Oct. 2020)

Table 2. Results of the second focus group (03 December 2020).

| Discussion title | Solutions |
|-----------------------------|---|
| Review of the results of | Being personal and professional involved in crisis, being involved in crisis by |
| The first consensus | person? Or being involved in crisis. |
| meeting and additional | Uncertainty |
| recommendation | Contradiction between knowledge and practice |
| | Missing work cycles |
| | Social isolation |
| | Physical barriers to communication |
| | Preferring bad option to worse options |
| The objectives of the | Finding a way to reduce healers' distress |
| The objectives of the | |
| healers' healing program | Thinking about alternative strategies |
| | A social support team to integrate users into digital platforms |
| | Improving empathy, compassion, and relational skills |
| | Accelerating the project to provide services as soon as possible to |
| | those who need support |
| | Focusing on mental health, especially the prevention of major |
| | depressive disorder and suicide |
| | Improving decision-making and reasoning skills and prioritizing |
| | communication capabilities over medical techniques |
| | Social supporting of healthcare professionals by their peers (We can |
| | talk about our professional experiences) |
| | Structuring and organizing for supporting care teams |
| | Long-term planning for other possible future crises |
| | Spreading technological support and teaching caregivers to |
| | use digital instruments |
| | Providing more options for receiving psychosocial services |
| | Using online services instead of limited local ones and benefiting |
| | |
| | from more and more capable professionals |
| | Clarifying the identity of the employee and the client and determining the |
| | exact goals and needs of the client for better planning |
| | Improving self-care skills |
| The main strategies for | Providing easy points to establish in daily work |
| meet the objectives | Using videos |
| | Producing platforms for the best communication, such as forums |
| | Implementation of complete control and supervision |
| | Avoiding the presentation of too much information in order to make |
| | the platform as simple as possible |
| | Thinking about realistic strategies instead of Idealistic ones |
| | Using short and precise methods of education |
| | Taking advantage of shared decision-making |
| | Improving accessibility and providing easy ways to reach the exact answer |
| | Presenting a complete package including all tactics together in one platform to |
| | avoid confusion and guide the user as well as possible |
| | Discussing more practical strategies instead of exclusively theoretical ones |
| | Not forgetting physical activities to improve the morale of users |
| | Application of new strategies such as games, applications, and so on, instead |
| | of traditional ones |
| | Using step-by-step strategies and not offering everything at once |
| | |
| | Thinking about dynamic strategies instead of static ones |
| Online service packages | Discussing interactive strategies instead of dissociated ones |
| | Videos |
| | Podcasts |
| | Forums |
| | Webinars |
| | Main topics: how they can help themselves; personal and professional areas; |
| | how to maintain balance between themselves, their family, and their job; |
| | |
| | communication and decision-making skills |
| | |

Int J Body Mind Culture, Vol. 8, No. 2, 2021

http://ijbmc.org

04 April

In addition to the apparent needs mentioned, the specific "time constraints" of this group should be taken into consideration and, at the same time, a platform for exploiting the potential of these individuals to care for and change their approach from "reactive" to "proactive" should be provided in the response process.

The expertise and abilities of this group to care for other people can be used effectively in response to their own needs and the needs of other health care providers.

According to the focus group results, the healers' healing program is designed in 3 subsets of general objectives. The first part is presenting practical and effective material. The platform content is presented in the form of lectures, webinars, infographics, practical exercises, and infomotions. Members can also produce content using the facilities of the system. The second part is intended to measure the progress and effectiveness of the program. Therefore, in different sections, quizzes and psychometric tests appropriate to the content will be conducted online to monitor the members' progress. The third part is the possibility of group activities in the form of relative groups freeform groups called self-help groups to increase the effectiveness of the content.

The principle investigators of the project suggested a service package based on the focus groups and gathered expert opinions, and finalized healers' healing platform with the following structural components.

Healers' Healing program: Healers' Healing website was designed with the aim of educating caregivers all over the world and improving their psychosocial skills. Healthcare providers can use the educational content, interact with each other, and share experiences in their personal life and work settings.

We considered gamification strategies for designing this service package. Gamification is an approach that can make people more engaged in and responsible for their health-related decisions (Pereira, Duarte, Rebelo, & Noriega, 2014). E-learning websites that use gamification as an engagement strategy are deemed as the most effective websites by experts (Rebelo & Isaias, 2020). Moreover, applying gamification to websites can also enhance communication efficiency (Hsieh & Yang, 2020).

For the gamification of the program, we used principles of knowledge transfer strategies, and we were inspired by the Jungian evolutionary journey. We are trying to design a lively and intimate space for the caregivers with fewer technical and scientific terms. To be realistic, we can only steal a portion of their leisure and web surfing time.

According to the focus groups' findings, the content of the program is defined in 7 major parts called "seven arts" and each art includes subdivisions as listed below: Art of presence

-Fields of awareness: proprioception, attention, perception, thinking, emotion, relation, intention

-Presence experience: in personal life, in practice

-Optimizing body, mind, and relationship economy

-Mindfulness-based training

Art of rapport

- Care and attachment
- Emotion regulation
- Sympathy, empathy, compassion
- Relationship
- Communication
- Synchronization

Art of thinking

- Recognizing biases, errors, and heuristics

- Clinical Reasoning
- Critical thinking
- Creativity
- Decision-making

Art of moral work

- Moral sensitivity
- Moral reasoning
- Moral principles
- Narrative ethics
- Ethics of care

Art of meaning work

- Chance, teleology, and teleonomy
- Consciousness evolution
- Pragmatics of meaning
- Values and meaning
- The absurd, the meaningful, and liberty
- Meaning of work
- Meaning of care
- Singularity of meaning of life

Art of spirituality

- Spirituality and religion
- The Pre-personal, the personal, and the transpersonal spiritualties
- Ego and higher selves
- Intentionality and prayer
- Spiritual care

Art of balance

- Self-family-organization balance
- Non-dual energy investment
- Intra-inter-transpersonal integrity
- Coherent narrative

- Synergism

The program should also be attractive so that the audience can relate and experience it as an enjoyable journey that helps them feel better about their job and themselves. They should not feel like they are in an educational program and perceive it as an overload of work time.

The content of this project will be released in the form of articles, podcasts, and videos. This project is available for healthcare staff, and the only requirement for joining the program is that each member be proved as a member of the health care society by uploading their educational certificate.

The 3 main parts of the website include individual journey, group journey, and wall.

All members have the same journey in healers' healing. They should pass 7 steps called "seven arts", and after each step, they receive a badge of their level on this journey. The badge can be found in the profile section.

Each member can follow the program individually or by joining a group called "self-help group". Group activities include reviewing the content of the "seven steps", sharing experience according to the journey, content production according to their needs and project mission, and holding project promotion programs.

Each group will have its own page on the website, and they have to upload the reports of their meetings after each appointment.

| | Individual scoring terms: | | |
|---|---|--|--|
| | Individual score = 4A +5B +5C +4D +5E +4F +5G +3H +5I | | |
| А | Member's Satisfaction | | |
| В | Presence in self-help group meetings | | |
| С | Passed steps | | |
| D | Number of specialized courses passed | | |
| Е | Group scores | | |
| F | Running self-help group meetings | | |
| G | Scientific articles related to Healer's health | | |
| Н | Wall posts | | |
| Ι | Change in health status | | |

Table 3. Individual scoring terms

In order to motivate companionship and the implementation of gamification strategies, and provide a new and lasting experience for each member, they will be evaluated within some activities as shown in table 3. By receiving scores on each parameter, they will be graded in the levels and receive certificates. They can also benefit from webinars and other educational courses.

Individual journey will be measured by the parameters listed below:

There are 4 levels for individual scores including traveler, wayfarer, facilitator, and leader.

In addition to each member's score, being placed in a level during each individual journey includes the condition that members of each level supervise the members of previous levels.

Moreover, in group journey, we have parameters for each of the group activities. Group scoring parameters include the following: Group scoring parameters includes terms in table 4.

There are 4 levels for group scores including silver, gold, platinum, and diamond. There will be some webinars and certificates for each group level.

Another part of this online platform is called the "Healers' Healing wall", which is an opportunity for each member to share their lived experience while going through the journey. It helps other members see the results of the program in daily life and motivates them to join and become a more active traveler on the seven arts journey.

Each wall post could also be a source for further research on caregivers' needs and the impact of the healers' healing program on each member.

In many countries like Iran, there are only a small number of eligible consultants who can lead Balint and supervision groups, so we perform team work on gathering data from more or less similar platforms and adopt a compatible and integrative program mainly on self-help group dynamism, and systemic and mindfulness-based approaches. The program is basically a virtual program, but the self-help group can be held in person. We intend to compile a workbook for this caregivers' self-help program.

The platform also leads the users to more professional webinars, in person workshops, Balint groups, supervisions, and retreat courses.

| Table 4. Group scoring terms | | |
|---|--|--|
| Group scoring terms: | | |
| $Group \ score = X + 5A + 5B + 3C + 4d + 5E + 5F$ | | |
| Х | The years of the group work experience | |
| А | Members' satisfaction | |
| В | Order of meetings | |
| С | Intergroup activities | |
| D | Group wall posts | |
| E | Average change in members' health | |
| F | Holding promotional programs | |

T.L. 4 C

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

The authors would like to thank Niloofar Mani for the final proofread.

References

- Adinda, A., & Bintari, D. R. (2020). Mindfulness-Based Stress Reduction (MBSR) group intervention to reduce burnout among caregivers in nursing Home. *Journal of Educational, Health and Community Psychology*, 9(2), 3047.
- Bogiatzaki, V., Frengidou, E., Savakis, E., Trigoni, M., Galanis, P., & Anagnostopoulos, F. (2019). Empathy and burnout of healthcare professionals in public hospitals of Greece. *International Journal of Caring Sciences*, 12(12), 611-626.
- Brecka, T. A., Vnukova, M., Raboch, J., & Ptacek, R. (2018). Burnout syndrome among medical professionals: Looking for solutions. Act Nerv Super, 60(2), 33-39.
- Brindley, P. G., Olusanya, S., Wong, A., Crowe, L., & Hawryluck, L. (2019). Psychological 'burnout' in healthcare professionals: Updating our understanding, and not making it worse. J Intensive.Care Soc, 20(4), 358-362. doi:10.1177/1751143719842794 [doi];10.1177_1751143719842794 [pii]. Retrieved from PM:31695741
- Burton, M. (2000 Nov 23). The psychologist as developer of services. El Psicólogo ante los nuevos desafíos en ambientes educativos. Universidad Central de Venezuela. Accessed 23 Nov 2000.
- Busch, I. M., Moretti, F., Purgato, M., Barbui, C., Wu, A. W., & Rimondini, M. (2020). Psychological and Psychosomatic Symptoms of Second Victims of Adverse Events: a Systematic Review and Meta-Analysis. J Patient.Saf, 16(2), e61-e74. doi:10.1097/PTS.000000000000589 [doi];01209203-202006000-00012 [pii]. Retrieved from PM:30921046
- Busch, I. M., Moretti, F., Mazzi, M., Wu, A. W., & Rimondini, M. (2021). What We Have Learned from Two Decades of Epidemics and Pandemics: A Systematic Review and Meta-Analysis of the Psychological Burden of Frontline Healthcare Workers. *Psychother.Psychosom.*, 90(3), 178-190. doi:000513733 [pii];10.1159/000513733 [doi]. Retrieved from PM:33524983
- Carminati, L. (2020). Behavioural Economics and Human Decision Making: Instances from the Health Care System. *Health Policy*, 124(6), 659-664. doi:S0168-8510(20)30075-0 [pii];10.1016/j.healthpol.2020.03.012 [doi]. Retrieved from PM:32386789
- Cavanagh, N., Cockett, G., Heinrich, C., Doig, L., Fiest, K., Guichon, J. R. et al. (2020). Compassion fatigue in healthcare providers: A systematic review and meta-analysis. *Nurs Ethics.*, 27(3), 639-665. doi:10.1177/0969733019889400 [doi]. Retrieved from PM:31829113
- Cospormac, M. (2020). *Professional exhaustion syndrome or burn out*. Moldova: Nicolae Testemitanu State University of Medicine and Pharmacy
- Dyrbye, N. D., Shanafelt, T. D., Sinsky, C. A., Cipriano, P. F., Bhatt, J., Ommaya, A. et al. (2017). Burnout Among Health Care Professionals: A Call to Explore and Address This Underrecognized Threat to Safe, High-Quality Care. https://nam.edu/burnout-amonghealth-care-professionals-a-call-to-explore-and-address-this-underrecognized-threat-tosafe-high-quality-care/ 2017 Jul 5.
- Fitzpatrick, O., Carson, A., & Weisz, J. R. (2020). Using Mixed Methods to Identify the Primary Mental Health Problems and Needs of Children, Adolescents, and Their Caregivers during the Coronavirus (COVID-19) Pandemic. *Child Psychiatry Hum Dev.* doi:10.1007/s10578-020-01089-z [doi];10.1007/s10578-020-01089-z [pii]. Retrieved from PM:33108612

- Gazelle, G., Liebschutz, J. M., & Riess, H. (2015). Physician burnout: coaching a way out. J Gen.Intern.Med, 30(4), 508-513. doi:10.1007/s11606-014-3144-y [doi]. Retrieved from PM:25527340
- Gerber, Z., & Anaki, D. (2020). The Role of Self-compassion, Concern for Others, and Basic Psychological Needs in the Reduction of Caregiving Burnout. *Mindfulness.(N Y.)*, 1-10. doi:10.1007/s12671-020-01540-1 [doi];1540 [pii]. Retrieved from PM:33224308
- Hofmeyer, A., Taylor, R., & Kennedy, K. (2020). Fostering compassion and reducing burnout: How can health system leaders respond in the Covid-19 pandemic and beyond? *Nurse.Educ.Today*, 94, 104502. doi:S0260-6917(20)30671-7 [pii];10.1016/j.nedt.2020.104502 [doi]. Retrieved from PM:32980180
- Houkes, I., Winants, Y., Twellaar, M., & Verdonk, P. (2011). Development of burnout over time and the causal order of the three dimensions of burnout among male and female GPs. A three-wave panel study. *BMC Public Health*, *11*, 240. doi:1471-2458-11-240 [pii];10.1186/1471-2458-11-240 [doi]. Retrieved from PM:21501467
- Hsieh, H. C. L., & Yang, H. H. (2020). Incorporating gamification into website design to facilitate effective communication. *Theoretical Issues in Ergonomics Science*, 21(1), 89-111.
- Hu, D., Kong, Y., Li, W., Han, Q., Zhang, X., Zhu, L. X. et al. (2020). Frontline nurses burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: A large-scale cross-sectional study. *EClinicalMedicine*, 24, 100424.
- Langballe, E. M., Innstrand, S. T., Aasland, O. G., & Falkum, E. (2011). The predictive value of individual factors, work-related factors, and work Çôhome interaction on burnout in female and male physicians: a longitudinal study. *Stress and Health*, 27(1), 73-87.
- Mahmoud, A. S., Elhosany, W. A. E., & Helal, O. M. (2020). The Relationship Between Psychological Wellbeing And Work Motivation Among Staff Nurses In Governmental Hospitals In Port Said. *Port Said Scientific Journal of Nursing*, 7(4), 21-39.
- Masiero, M., Mazzocco, K., Harnois, C., Cropley, M., & Pravettoni, G. (2020). From Individual To Social Trauma: Sources Of Everyday Trauma In Italy, The US And UK During The Covid-19 Pandemic. J Trauma.Dissociation., 21(5), 513-519. doi:10.1080/15299732.2020.1787296 [doi]. Retrieved from PM:32654633
- Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *MBI: Maslach burnout inventory*. Incorporated Sunnyvale, CA, CPP.
- McKernan, J. (1996). Curriculum Action Research: A Handbook of Methods and Resources for the Reflective Practitioner. CRC Press.
- Menon, V., & Padhy, S. K. (2020). Ethical dilemmas faced by health care workers during COVID-19 pandemic: Issues, implications and suggestions. *Asian.J Psychiatr.*, 51, 102116. doi:S1876-2018(20)30227-6 [pii];10.1016/j.ajp.2020.102116 [doi]. Retrieved from PM:32371227
- Miloševic, K., Dimoski, Z., Miljanovic, G., Stojanovic, G., Terzic-Markovic, D., & Jovanovic, R. (2020). Burnout syndrome in nurses and psychiatric staff. Sestrinska Vizija, 4(7), 12-18.
- Monrouxe, L. V., & Rees, C. E. (2017). Healthcare Professionalism: Improving practice through reflections on workplace dilemmas. John Wiley & Sons.
- Moss, M., Good, V. S., Gozal, D., Kleinpell, R., & Sessler, C. N. (2016). An Official Critical Care Societies Collaborative Statement: Burnout Syndrome in Critical Care Health Care Professionals: A Call for Action. *Am J Crit Care*, 25(4), 368-376. doi:25/4/368 [pii];10.4037/ajcc2016133 [doi]. Retrieved from PM:27369038
- Naidoo, T., Tomita, A., & Paruk, S. (2020). Burnout, anxiety and depression risk in medical doctors working in KwaZulu-Natal Province, South Africa: Evidence from a multi-site study of resource-constrained government hospitals in a generalised HIV epidemic setting. *PLoS.One.*, 15(10), e0239753. doi:10.1371/journal.pone.0239753 [doi];PONE-D-20-06594 [pii]. Retrieved from PM:33052921

Park, S. (2021). Caregivers' Mental Health and Somatic Symptoms During COVID-19. *The Journals of Gerontology: Series B*, 76(4), e235-e240.

- Pereira, P., Duarte, E. I., Rebelo, F., & Noriega, P. (2014). A Review of Gamification for Health-Related Contexts. In A. Marcus (Ed.). *Design, User Experience, and Usability. User Experience Design for Diverse Interaction Platforms and Environments* (pp. 742-753) Cham: Springer International Publishing.
- Persson, E., Barrafrem, K., Meunier, A., & Tinghog, G. (2019). The effect of decision fatigue on surgeons' clinical decision making. *Health Economics*, 28(10), 1194-1203.
- Petros Galanis, R. (2019). Empathy and Burnout of Healthcare Professionals in Public Hospitals of Greece. International Journal of Caring Sciences, 12(2), 1-16.
- Rebelo, S., & Isaias, P. (2020). Gamification as an Engagement Tool in E-Learning Websites. Journal of Information Technology Education: Research, 19, 833-854.
- Russell, B. S., Hutchison, M., Tambling, R., Tomkunas, A. J., & Horton, A. L. (2020). Initial Challenges of Caregiving During COVID-19: Caregiver Burden, Mental Health, and the Parent-Child Relationship. *Child Psychiatry Hum Dev*, *51*(5), 671-682. doi:10.1007/s10578-020-01037-x [doi];10.1007/s10578-020-01037-x [pii]. Retrieved from PM:32749568
- Salyers, M. P., Bonfils, K. A., Luther, L., Firmin, R. L., White, D. A., Adams, E. L. et al. (2017). The Relationship Between Professional Burnout and Quality and Safety in Healthcare: A Meta-Analysis. J Gen.Intern.Med, 32(4), 475-482. doi:10.1007/s11606-016-3886-9 [doi];10.1007/s11606-016-3886-9 [pii]. Retrieved from PM:27785668
- Shanafelt, T. D., Sloan, J. A., & Habermann, T. M. (2003). The well-being of physicians. Am J Med, 114(6), 513-519. doi:S0002934303001177 [pii];10.1016/s0002-9343(03)00117-7 [doi]. Retrieved from PM:12727590
- Shanafelt, T. D. (2009). Enhancing meaning in work: a prescription for preventing physician burnout and promoting patient-centered care. *JAMA.*, 302(12), 1338-1340. doi:302/12/1338 [pii];10.1001/jama.2009.1385 [doi]. Retrieved from PM:19773573
- Shanafelt, T. D., Gradishar, W. J., Kosty, M., Satele, D., Chew, H., Horn, L. et al. (2014). Burnout and career satisfaction among US oncologists. *J Clin Oncol.*, 32(7), 678-686. doi:JCO.2013.51.8480 [pii];10.1200/JCO.2013.51.8480 [doi]. Retrieved from PM:24470006
- Shanafelt, T. D., Gorringe, G., Menaker, R., Storz, K. A., Reeves, D., Buskirk, S. J. et al. (2015). Impact of organizational leadership on physician burnout and satisfaction. *Mayo.Clin Proc.*, 90(4), 432-440. doi:S0025-6196(15)00071-3 [pii]:10.1016/j.mayocp.2015.01.012 [doi]. Retrieved from PM:25796117
- Shanafelt, T. D., Dyrbye, L. N., Sinsky, C., Hasan, O., Satele, D., Sloan, J. et al. (2016). Relationship Between Clerical Burden and Characteristics of the Electronic Environment With Physician Burnout and Professional Satisfaction. *Mayo.Clin Proc.*, 91(7), 836-848. doi:S0025-6196(16)30215-4 [pii];10.1016/j.mayocp.2016.05.007 [doi]. Retrieved from PM:27313121
- Shen, X., Jiang, H., Xu, H., Ye, J., Lv, C., Lu, Z. et al. (2020). The global prevalence of turnover intention among general practitioners: a systematic review and meta-analysis. *BMC Fam Pract*, 21(1), 246. doi:10.1186/s12875-020-01309-4 [doi];10.1186/s12875-020-01309-4 [pii]. Retrieved from PM:33250045
- Shin, M. J., & Song, I.-J. (2019). A Convergence Study on Factors Influencing Burnout in Caregivers. Journal of the Korea Convergence Society, 10(9), 311-321.
- Singh, U., Singh, S., & Poonam. (2016). Psychosocial Competencies, Self-Efficacy and Performance of Nurses: A Comparative Study. *International Journal of Indian Psychology*, 3(3), 8.
- Sun, N., Wei, L., Shi, S., Jiao, D., Song, R., Ma, L. et al. (2020). A qualitative study on the psychological experience of caregivers of COVID-19 patients. *Am J Infect Control.*, 48(6), 592-598. doi:S0196-6553(20)30201-7 [pii];10.1016/j.ajic.2020.03.018 [doi]. Retrieved from PM:32334904
- West, C. P., Dyrbye, L. N., & Shanafelt, T. D. (2018). Physician burnout: contributors, consequences and solutions. *J Intern.Med*, 283(6), 516-529. doi:10.1111/joim.12752 [doi]. Retrieved from PM:29505159
- Wilkinson, H., Whittington, R., Perry, L., & Eames, C. (2017). Examining the relationship between burnout and empathy in healthcare professionals: A systematic review. *Burn.Res*,

6, 18-29. doi:10.1016/j.burn.2017.06.003 [doi];S2213-0586(17)30002-5 [pii]. Retrieved from PM:28868237

- Williams, E. S., Konrad, T. R., Linzer, M., McMurray, J., Pathman, D. E., Gerrity, M. et al. (2002). Physician, practice, and patient characteristics related to primary care physician physical and mental health: results from the Physician Worklife Study. *Health Serv.Res*, 37(1), 121-143. Retrieved from PM:11949917
- Zanatta, A. B., & de Lucca, S. R. (2015). Prevalência da síndrome de burnout em profissionais da saúde de um hospital oncohematológico infantil. *Revista da Escola de Enfermagem da USP*, 49(2), 253-260.
- Zhang, Y. Y., Zhang, C., Han, X. R., Li, W., & Wang, Y. L. (2018). Determinants of compassion satisfaction, compassion fatigue and burn out in nursing: A correlative metaanalysis. *Medicine (Baltimore.)*, 97(26), e11086. doi:10.1097/MD.000000000011086 [doi];00005792-201806290-00010 [pii]. Retrieved from PM:29952947
- Zhang, Z., & Min, X. (2020). The Ethical Dilemma of Truth-Telling in Healthcare in China. J Bioeth.Ing., 17(3), 337-344. doi:10.1007/s11673-020-09979-6 [doi];10.1007/s11673-020-09979-6 [pii]. Retrieved from PM:32394322